

R E M A R K S

Applicant has carefully considered the Final Office Action of July 18, 2005 rejecting all of the elected claims. The Applicant appreciates the indication of allowable subject matter in newly presented claim 21.

The Applicant also wishes to express his appreciation to the Examiner for the interview conducted by the undersigned, Applicant's attorney, on October 31, 2005. On December 15, 2005 a claims proposal was submitted. In a subsequent telephone interview of January 5, 2006, the Examiner indicated that upon filing this claims proposal as a formal response in an RCE procedure, he would consider the claims without a restriction requirement.

Thus, the present response is intended to implement the conclusions of these interviews, and to fully address all points of objection raised by the Examiner, and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

This response is being submitted together with the filing of an RCE request, and a time extension petition.

Claims 1, 3, 11 and 13 have been deleted. Claims 2, 4-8, 12 and 14-18 have been previously withdrawn per the election requirement. Claim 21 has been previously added, and claims 9 and 10 are now made dependent on it. New claim 22 has been added, and claims 19 and 20 are now made dependent on it. New claims 23-24 have also been added along with the required filing fee (see attached). Therefore, claims 9-10 and 19-24 remain in the case.

The present invention discloses a method and assembly for preventing unauthorized manipulation of common cylinder locks, where the manipulation is based on the Bumpkey or Blowgun methods, based on principles of the impact and momentum phenomenon.

The invention is based on a modified pin assembly which prevents impact-driven manipulation of the lock, wherein the modified pin assembly comprises a modified pin set comprising a tumbler pin and driver pin, with the modified pin set being provided with motion alteration means. The motion alteration means is adapted so as to alter the magnitude of the modified pin assembly response to an impact-driven blow applied to the tumbler pin, relative to the magnitude of the response of the standard pin assemblies contained in the common cylinder lock.

Thus, in accordance with the invention, when the tumbler pin is linearly displaced in response to an impact-driven blow of a given intensity, a portion of the impact-driven blow intensity is transmitted to the driver pin, causing it to be linearly displaced, as well, under influence of the motion alteration means. The standard pin assemblies clear the shear line, but the driver pin of the modified pin set continues to block the shear line, thus preventing unauthorized manipulation of the cylinder lock.

Claim 21 and its dependent claims 9-10 describe the embodiment in which the motion alteration means utilizes a recession and protrusion, as follows:

"...recession formed in one of said pins contained in said pin assembly, and a protrusion, in the other of said pins, for engaging said recession, such that when an impact-driven blow of a given intensity is applied so as to linearly displace said tumbler and driver pins, said pin protrusion engages said pin recession, strongly binding the tumbler and driver pins together."

Claim 22 describes a method based on the construction of the pin assembly of claim 21.

Claim 23 describes the embodiment in which the motion alteration means utilizes magnetic properties that cause binding of the modified pin set (formerly claim 7).

Claim 24 describes the embodiment in which the motion alteration means utilizes modified strength properties of the biasing spring (formerly claim 8).

The Examiner has maintained his rejection of claims 1 and 11 (now deleted) under Sec. 102(e) as being anticipated by Stemmerik et al. The Stemmerik reference describes a cylinder lock subjected to a lock picking technique using an impact.

As discussed in the interview with the Examiner, it is Applicant's position that the Stemmerik reference contains an inaccurate description of the physical nature of the impact and its result. The reference states, at col. 1, line 65:

"the stroke towards the tumbler pin is transmitted to the driver pin which is thereby lifted without any actual movement of the tumbler pin. By the arrangement according to the invention, the effect of the impact is transmitted through the movable member which constitutes one part of the driver pin".

As stated, Applicant believes that the statement cited above is inaccurate and this point has been shown in the explanation of the present invention relating to Figures 15 and 16 at page 10, line 16 through line 21.

During the interview, a working model was used to show the physical forces which act on the pins in the cylinder lock. The invention specification describes this in relation to Figures 18 and 19, beginning at page 12, line 4 through page 13 line 25:

(p. 12, line 5) "immediately after the hammer 62 has struck the Bumpkey 60 ... both the tumbler pins and the driver pins move from their locking positions ...".

This explanation is in direct contrast to the explanation of Stemmerik. It is stated further at page 13 line 20 of the invention specification:

"after the hammer has struck the Bumpkey with an intensity greater than the normal intensity applied to unlock the lock ... the driver pins clear the shear line... the driver pin in chamber T is displaced, however the tumbler pin, which is the longest tumbler pin in this lock is displaced so as to reach and block the shear line."

Stemmerik states that the driver pin is divided into two portions, 10 and 11 and that only portion no. 10 moves in response to the impact, while portion 11 remains in place, see col. 3 lines 13 through 16.

Since Stemmerik's statement is incorrect as has been explained, the Stemmerik device cannot be said to reveal the approach of the present invention.

The present invention is based on intensive research and experimentation, and presents several alternative embodiments to prevent impact-driven manipulation.

As now amended, claims 21-24 recite a modified pin assembly

"..... provided with motion alteration means adapted so as to alter the magnitude of its response to an impact-driven blow applied to said tumbler pin, relative to the magnitude of the response of the standard pin assemblies contained in said common cylinder lock..."

The Stemmerik reference describes no such motion alteration means, rather, the reference describes the inaccuracy outlined above, namely, that portion 11 of the driver pin remains in place.

Alternatively, Stemmerik describes the use of a close tolerance as a way of increasing friction of pins 10 and 11 in the bore (col. 3, lines 28-33), but this is not the same as the inventive motion alteration means.

Thus, in the present invention, as stated at p. 12, line 10 of the specification, it is clearly explained that in response to the intensity of the hammer striking the Bumpkey 60, both the tumbler pins and the driver pins move from their locking positions, but in the case of the

modified pin assembly the driver pin 78 moves less than the standard driver pin 54, and consequently the shear line is still blocked (p. 12, line 25 to p. 13 line 2).


In Figure 19, it is explained that even if the intensity is greater than the normal intensity used to unlock the lock in Figure 18, the driver pin in chamber T is displaced, however the tumbler pin which is the longest tumbler pin in this lock, is displaced so as to reach and block the shear line.

Therefore it is the Applicant's position that claims 21, 22, 23 and 24 distinguish over the cited reference (which is deemed inaccurate), and that these claims are patentable, with the dependent claims 9-10 and 19-20 being considered patentable as being based thereon.

As stated in the decision in In Re Marshall, 198 USPQ 344 (1978), "To constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art...". Since the Stemmerik reference neither 1) identically describes the invention, nor 2) enables one skilled in the art to practice it, Applicant deems the 102(e) rejection improper, and respectfully requests that it be withdrawn.

In view of the foregoing remarks, all of the claims in the application are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,


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